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Development Finance Institutions in Developing Countries: A Literature Review

Florian Léon

Florian Léon, FERDI and Université Clermont Auvergne, CNRS, IRD, CERDI, Clermont-Ferrand, France.
Contact: florian.leon1@ferdi.fr

Abstract

Development Finance Institutions (DFIs) are government-owned entities that play an increasingly important role in supporting private sector projects in developing countries. This paper synthesizes key findings from the academic and grey literature to provide a comprehensive understanding of DFIs. We structure the discussion around five core questions: the rationale for the existence of DFIs, their operational models, resources and instruments, financial performance, and impact on beneciaries and broader communities. By highlighting both established knowledge and gaps, this synthesis aims to guide policymakers, practitioners, and researchers. The paper concludes by suggesting directions for future research, addressing pressing uncertainties, and advancing the discourse on DFIs' contributions to development finance.

Keywords: development finance institutions, business model, impact, developing countries.

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1 Introduction

Development Finance Institutions (DFIs) are government-owned financial institutions that directly support private projects in developing countries. They are emerging as a key player in the development finance landscape, alongside development banks, agencies and ministries. Despite their limited number, their flows are far from anecdotal. For example, existing estimates suggest that their investments account for about 20% of FDI in Africa (Léon, 2024). Their importance in development finance is expected to continue to grow, both because of the growing interest in supporting the private sector in developing countries and because of their central role in mobilizing private capital from developed countries to low- and middle-income countries.

The objective is to synthesize key findings from the academic literature on DFIs. Our aim is to identify the current state of knowledge on DFIs to inform policymakers and practitioners, but also to highlight the unknowns and identify avenues for future research. After identifying relevant contributions, including both published articles and grey literature (unpublished papers and reports), we organize the discussion around five main questions: (i) Why do DFIs exist? (ii) How do DFIs operate? (iii) What are their resources and tools? (iv) How do DFIs perform financially? and (v) What are their impacts (on beneficiaries and non-beneficiaries)? We present the known (and unknown) aspects of each topic. In the final section of the paper, we discuss avenues for future research in each area.

This review is closely linked to previous literature reviews. McHugh (2021) conducts a literature review on development finance and private sector mobilization, with a particular focus on multilateral development banks (MDBs). The paper covers four key areas: political economy, project finance structure, syndicate composition, and loan pricing. While this review provides interesting findings, its direct relevance to DFIs is rather limited. De Haas and González-Uribe (2024) review the literature on the effectiveness of public policies in facilitating firms' access to finance. They examine seven different types of policies and the role of development banks (and hence DFIs) is one of them. However, they limit their analysis to one aspect, namely the impact on firms' credit constraints. In addition, their review is not focused on developing countries and considers many experiments in advanced countries. Finally, and closest to ours, Attridge et al. (2019) review the evidence on the impact of DFI investment on employment, income, access to goods, and inequality. While their results show a positive impact of DFI investment on job creation, the results for other variables remain inconclusive. However, these results should be treated with caution, as the scientific relevance of the included studies is questionable.[1]

[1] In fact, of the 43 studies included, 35 were provided by the DFIs themselves and none were published in peer-reviewed journals that are included in major lists of economic reviews (e.g. ABS Journal Ranking,

In addition, the review focuses exclusively on the impact of DFIs, ignoring other aspects discussed below. To our knowledge, the current review is the first to provide a global overview of DFIs.

The paper is organized as follows: The following section introduces development finance institutions. Section 3 briefly discusses the methodology used for the literature review. Sections 4 to 8 present the literature review for each topic. Section 9 provides some avenues for future research and the last section concludes the paper with some recommendations for policy makers.

2 What are development finance institutions?

2.1 General presentation of DFIs

Development Finance Institutions (DFIs) are publicly owned financial institutions that invest in the private sector of developing countries.[2]

The rationale for development finance institutions (DFIs) is based on three interrelated conditions. First, DFIs assume that the private sector plays a central role in development. Private sector development has many direct and indirect effects, including job and wealth creation and progress in areas such as innovation and gender equality. Second, addressing the business climate or enabling environment alone is proving insufficient to stimulate private sector development in developing countries. Evidence suggests that the private sector in developing countries faces significant constraints. In particular, firms suffer from limited access to finance. When private investors are reluctant to invest in these markets, it becomes the responsibility of the public sector to fill the gap. DFIs therefore take on the role of financing the private sector directly. Third, investing in low- and middle-income countries is a financially viable proposition. As first movers, DFIs are demonstrating that such investments can deliver positive development outcomes while remaining financially sound. It should be noted that, even if it is not stated explicitly, DFIs can also be seen as a promotion vehicle for the country's DFI-originating companies.

HCERES listing). The authors acknowledge the low quality of the included studies.

[2]This definition is consistent with that of the OECD and the European DFIs (EDFIs). The OECD defines DFIs as "National and international development finance institutions (DFIs) are specialized development banks or subsidiaries established to support private sector development in developing countries. They are usually majority-owned by national governments and receive capital from national or international development funds or government guarantees. This ensures their creditworthiness, enabling them to raise substantial funds on the international capital markets and provide financing on very competitive terms." (Source: OECD).
EDFI's definition states that "DFIs - Development Finance Institutions - are government-sponsored institutions that invest in private sector projects in low- and middle-income countries. Alongside aid agencies and development banks, DFIs promote job creation and sustainable economic growth, contributing to the UN Sustainable Development Goals." (Source: EDFI).

DFIs include both domestic and foreign institutions. The current literature focuses mainly on the latter because, with some exceptions such as BNDES in Brazil, domestic DFIs are small players in low- and middle-income countries. DFIs can be owned by a single country (unilateral DFIs) or by several countries (multilateral DFIs). Many multilateral DFIs are actually the private sector arm of multilateral development banks. Another important distinction among DFIs is their legal structure. There are two models. On the one hand, many unilateral DFIs are independent structures (an important exception is JICA, a Japanese development bank). On the other hand, many multilateral DFIs operate as a department within a multilateral development bank. There are exceptions to this model for multilateral DFIs, notably the IFC (of the World Bank Group) and IDB Invest (of the Inter-American Development Bank). The advantage of an independent structure is that it clarifies the role of the DFI in the activities of the development bank. As noted in the previous subsection, development banks and DFIs have different business models in terms of clients (public vs. private) but also financial instruments (e.g. no concessional loans for DFIs). The cost of an independent structure is its limited size and inability to take advantage of the economies of scale that larger institutions allow.

2.2 Additionality and mobilization

DFIs follow two main principles when making investment decisions.

The key principle of the DFI business model is additionality. As the term suggests, additionality means that DFIs contribute something that is not readily available in the market. The most common view of additionality focuses on the financial aspect. Financial additionality means that a DFI enables the financing of a project that would not have been possible without its support. DFIs are not expected to replicate the actions of private investors; rather, they support projects that have positive but low (short-term) returns and/or are too risky for private investors to finance. In essence, DFIs increase overall investment in developing countries, rather than simply crowding out private investment (Carter et al., 2021). But the principle of additionality goes beyond the financial dimension. DFIs are mandated to invest in high-impact projects. Consequently, their investments are expected not only to enable investments, but also to increase their impact. As a result, DFIs carefully select the most impactful projects and provide technical assistance and other complementary services to increase their positive impact on the community.

In addition to the principle of additionality, DFIs also play a critical role in catalyzing private flows. Recognizing that their investments alone are not sufficient to address the challenges facing the private sector in developing countries, DFIs aim to leverage private resources. Mobilization can be explicit or tacit. DFIs can explicitly mobilize

private capital by contracting with investors, with both parties contributing funds to the investment. DFI mobilization is also tacit. DFI investments are expected to have a lasting impact beyond the completion of the investment. The essence of indirect mobilization lies in the demonstration effect that DFIs provide. Even when investing independently, DFIs seek to demonstrate the viability of investing in the private sector in low- and middle-income countries. In addition, DFIs can absorb first-mover costs, thereby reducing the costs and risks associated with future investments (Collier et al., 2020). DFIs are expected to share their expertise and disseminate information to other investors (De Aghion, 1999).

2.3 Operational modes: direct and indirect finance

DFIs operate in two main ways.

On the one hand, DFIs directly finance non-financial corporations (corporate finance) or projects (project finance). Corporate finance involves the direct provision of funds to non-financial corporations. The choice between debt and equity instruments depends on the risk involved and the expected return and impact, with each having its own advantages and disadvantages. DFIs also engage in project finance, using a range of different financial instruments as project loans or risk hedging products.

On the other hand, DFIs use an intermediated approach. The principle of intermediated lending is to provide funds to a financial institution (a bank, microfinance institution or fund), which will use these funds to expand lending to non-financial enterprises and projects identified as priorities in the agreement with the DFIs. The DFIs' financial instruments are designed to increase returns by reducing the cost of funds (e.g., through the provision of long-term loans) or limiting risks (through risk management products such as guarantees) in order to incentivize private lenders to finance these high-impact projects and enterprises.

Both modes of operation enable the financing of non-financial enterprises and are designed to leverage private capital in addition to the DFI's resources, in line with the "blended finance" approach.[3] However, the two approaches have different goals and objectives. The direct channel is well suited to financing large projects (e.g. infrastructure). DFIs typically invest substantial amounts, rarely financing less than a few million dollars and often contributing less than half of the total investment. This significant investment, particularly in developing countries, is remarkable, and the number of projects of this size is limited. On the other hand, intermediated lending is a way of providing funds to small businesses that a DFI cannot finance directly. Indeed, DFIs are not equipped to make

[3]In the direct channel, it is common for DFIs to co-finance projects with other investors, including other DFIs, private investors, or public operators. Intermediated lending is another way of leveraging private capital, as supported lenders mix their own resources with DFI funds to offer new loans.

many small loans, and intermediated lending allows them to enter into a multi-million dollar agreement with a single institution, which can then divide the funds into many smaller loans. In addition, local financial intermediaries are better able to effectively screen and monitor borrowers using soft information (Liberti and Petersen, 2019).

2.4 DFIs, development banks and private investors: which differences?

It is useful to explore the similarities and differences between DFIs and two different categories of actors: development banks on the one hand and private investors on the other.

DFIs and development banks, especially those with an international mandate, are both public financial institutions with a development mission. They engage in projects that generate sufficient returns to be financially viable, while aiming to have a positive development impact. However, DFIs differ from development banks (DBs) in two main ways. The main difference lies in the intervention objective of each institution. DBs generally have a relatively broad mandate. DFIs, on the other hand, are dedicated to supporting private enterprises. Schematically, DBs mobilize public funds for the public (and private) sector, while DFIs mobilize public funds for the private sector only.[4] The second major difference is that DFIs do not provide concessional finance. Unlike DBs, DFIs are expected to invest on market terms. There are two main reasons for this approach: first, to avoid market distortions; and second, to set an example for all investors by demonstrating that investing in low- and middle-income countries can be financially viable.

DFIs also differ from private investors in developing countries. While both types of financiers operate on a demand-driven model and provide funds at market rates, they differ in their objectives. In essence, private investors seek to maximize risk-adjusted returns, while DFIs balance financial performance with the impact of their investments. In this way, DFIs can be likened to impact investors. As a result, DFIs differ from other investors along three main dimensions. First, DFIs prioritize projects that have significant potential to benefit communities, but may be considered unattractive to private investors due to perceived risks or below-market returns. Second, DFIs go beyond mere financial contributions by providing additional services, including technical assistance, and non-financial benefits, such as policy support. These additional services are strategically designed to enhance project success and address potential challenges. Finally,

[4]DBs contribute indirectly to private sector development by improving the business climate or conditions.

DFIs adhere to higher environmental, social and governance (ESG) standards than private entities, demonstrating their commitment to sustainable and responsible investment practices.

2.5 A few data on DFIs

Table 1 presents a list of the major DFIs operating in developing countries. To identify the DFIs, we cross-referenced the lists provided by the OECD (here) and the European DFIs (here), as well as lists of DFIs used in academic papers (Gajigo et al., 2022; Léon, 2024).[5]

The most striking feature is the coexistence of unilateral and multilateral DFIs. Of the 26 DFIs identified, 7 are multilateral[6] and 18 are unilateral, mainly from Western countries.

Another notable difference is the considerable heterogeneity in size among DFIs. Figure 1 documents that the largest DFI, the IFC, accounts for more than half of the total assets among legally independent DFIs.[7] There are three groups of DFIs. The second largest DFI is the US DFC, which manages 9% of total assets. Next is a group of large DFIs, including four bilateral DFIs (FMO, BII, Proparco, and KfW-DEG) and IDB Invest, which manage about 5-6% of total assets. Finally, there is a group of the 11 smallest bilateral DFIs. The sum of their activities accounts for 6% of total assets. It is important to note, however, that this picture is somewhat obscured by the omission of significant multilateral DFIs such as the EIB.

Another distinction between DFIs is based on their geographical coverage. Table 1 shows that regional DFIs are often established to finance enterprises in their member countries. This is the mandate of IDB Invest, the Asian Development Bank, the African Development Bank and the Islamic Development Bank. The European multilateral DFIs are more specific. Both the European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) focus on their member countries. However, they also have a global reach, especially the EIB, but the EBRD also invests in the Middle East and North Africa. The IFC is the only multilateral DFI with a broad geographic mandate. Unlike multilateral DFIs, unilateral DFIs have a global mandate in terms of geography. However, this does not mean that their activity is evenly distributed

[5]We also add JICA, which is a development bank that invests in firms in low- and middle-income countries. It is also noteworthy that some DFIs have undergone name changes such as US DFC (formerly OPIC) and BII (formerly CDC).

[6]indeed, the list of multilateral DFIs could be extended, as many small regional development banks also have a private sector window, such as BOAD or the Eurasian Development Bank.

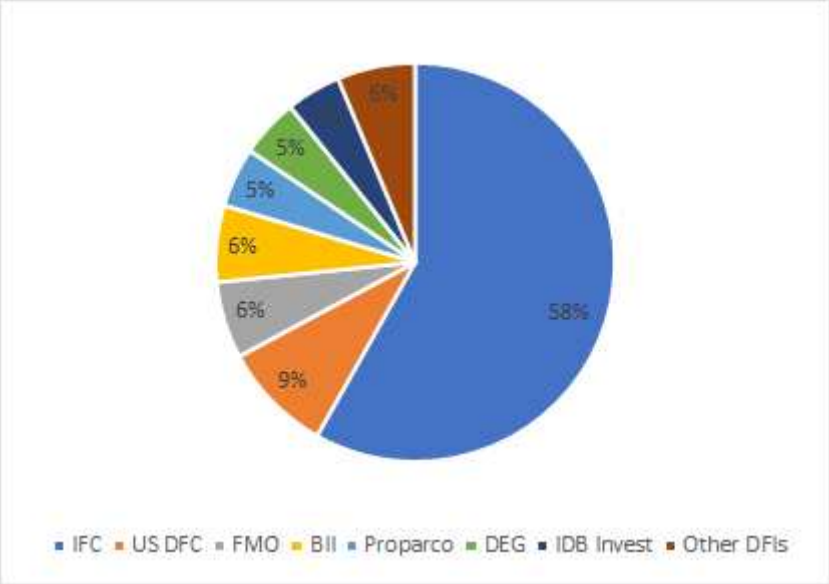
[7]For the purposes of our analysis, we limit our focus to legally independent DFIs because we cannot isolate the size of the private sector activities of other development banks.

Table 1: List of major DFIs

DFI name	General information		Size & activity		
	Creation	Owner	Assets	Staff	Coverage†
Panel A: Unilateral DFIs					
US DFC	1969	USA	16,750	681	World
FMO	1970	Netherlands	10,625	661	World
BII	1948	United Kingdom	9,943	603	World
DEG	1962	Germany	8,266	573	World
PROPARCO	1977	France	8,256	457	World
NORFUND	1997	Norway	3,826	121	World
OeEB	2008	Austria	1,447	68	World
BIO	2001	Belgium	1,194	76	World
SWEDFUND	1979	Sweden	879	65	World
FINNFUND	1980	Finland	830	96	World
IFU	1967	Denmark	820	98	World
SIFEM	2011	Switzerland	771	30	World
SIMEST	1991	Italy	585	212	World
FinDev	2018	Canada	433	n.a.	World
COFIDES	1988	Spain	208	89	World
SOFID	2007	Portugal	19	10	World
CDP-DF	1991	Italy	n.a.	33	World
BMI-SBI	1971	Belgium	n.a.	n.a.	World
JICA*	1974	Japan	116,536	1,968	World
Panel B: Multilateral DFIs					
IFC	1956	World	99,010	4200	World
IDB Invest	1986	America	9,401	2000	America
EIB*	1958	Europe	607,744	4,000	World
AsDB*	1966	Asia	290,658	3687	Asia
EBRD*	1991	World	85,066	3000	Europe† and MENA
AfDB*	1964	Africa	50,840	2095	Africa
IslDB*	1975	Islamic countries (OIC)	36,400	932	OIC

Assets are total assets in current US dollars in 2022 (source Hu et al. (2022)). The data on employees are extracted from various sources (EDFI, DFI's website, etc.) and should be treated with caution. It is provided for comparison purposes only.
Column "Owner" reports the State owners. If more than one state is the owner, we specify the common characteristics of owners.
Column "Coverage" presents the client perimeter. World refers to low- and middle-income countries across the world, irrespective of region considered.
*Figures for the DFIs with an asterisk cannot be directly compared with other DFIs, as they include activity of the entire multilateral development bank. † refer to Central and Eastern Europe.

Figure 1: Size heterogeneity across (legally-independent) DFIs



The figure displays percentage of total assets managed by legally independent DFIs. The list of DFIs considered: IFC, IDB Invest, US DFC, FMO, BII, DEG, PROPARCO. The category other includes NORFUND, OeEB, BIO, SWEFUND, FINNFUND, IFU, SIFEM, SIMEST, FINDEV, COFIDES, SOFID, CDP-FI).

around the world. Table 2 shows the activity of unilateral DFIs in terms of geography. A significant number of them focus on sub-Saharan Africa, with five DFIs allocating more than half of their total portfolio to this region and six others allocating between 30 and 50 percent. However, we find that some countries with strong links to other parts of the world are more likely to favor these regions. For example, the Spanish DFI (COFIDES) and the Canadian DFI (FinDev) allocate more than half of their portfolio to Latin American companies, and the British DFI (BII) is relatively active in Asia (many Asian countries are members of the Commonwealth).

Table 2 also shows the breakdown by sector and financial product. There are also differences by sector. Financial services are often the first sector supported by DFIs, accounting for more than a third of total investment for the majority of DFIs. The weight of intermediated lending (indirect finance) in DFIs' activity explains the importance of finance in their portfolio. Infrastructure follows closely, although some DFIs focus their portfolios on other sectors such as manufacturing or agriculture.

In terms of products, two main models emerge. The majority of DFIs primarily offer debt instruments, which account for between two-thirds and three-quarters of their investments. Conversely, another group of DFIs, including BII and the Nordic DFIs (Norfund, Finnfund, Swedfund, IFU), focus on equity. A limited number of (often large) DFIs also provide guarantees.

Finally, DFIs differ in terms of their resources. While some DFIs are able to raise

Table 2: Portfolio composition of a sample of DFIs

DFI	Geography				Sector					Products		
	SSA	LAC	S. Asia	Oth.	Fin	Infra	Manuf	Agri	Oth.	Loan	Equity	Guar.
US DFC												
FMO	30	20	14	36	41	31	1	12	15	62	35	3
BII	51	0	32	17	26	41	4	7	22	25	69	6
Proparco	42	21	6	31	35	23	19	11	12	65	23	12
DEG	22	28	9	41	28	22	20	7	23	63	37	
Norfund	62	15	9	14	34	38	3	7	18	26	72	2
OeEB	16	16	14	54	41	26	7	8	18	67	30	3
BIO	40	18	18	24	40	26	4	6	24	57	43	
FINNFUND	50	10	8	32	23	22	13	26	16	40	60	
Swedfund	61	0	17	22	41	40	2		17	37	63	
IFU	34	19	17	30	33	29	9	8	21	24	75	1
SIFEM	28	18	14	40	24	17	40	4	15	27	73	
SIMEST	11	36	9	44	0	11	69	3	17		100	
FinDev	39	52		9	70	12			18	76	24	
COFIDES	17	60	2	21	42	31	16	7	4	67	33	
SOFID	56	3		41		53	30		17	100		
CDP-DF	46	28	4	22	67	5	18	3	7	76	24	

Sources: EDFI and the website of FinDev Canada (author's computation). Figures are percentages of total portfolio.

funds directly from the market by issuing bonds (such as the Dutch DFI, FMO), others rely on their own resources and/or public transfers to operate (Attridge and Novak, 2022).

3 Methodology

The objective of this paper is to provide an overview of the current state of knowledge on DFIs in the academic literature. The literature review is based on a semi-systematic review (Snyder, 2019). We proceeded in two steps. First, we identified published and unpublished articles and reports that focus on DFIs. Second, we selected relevant articles and classified them into different categories that help us structure the literature review presented below.

The identification of relevant works was based on a web search in Google Scholar. To do this, we first selected documents published after 1990 that had the following list of keywords in their title: "DEVELOPMENT FINANCE INSTITUTION", ""DEVELOPMENT FINANCE INSTITUTIONS", "DEVELOPMENT FINANCIAL INSTITUTION", "DEVELOPMENT FINANCIAL INSTITUTIONS", "DFI", "DFIs".[8] After reading the abstracts (executive summaries for reports) of selected documents in the first step, we retained relevant documents. We then completed this search using a snowball method. We identified the references in the article under consideration and the articles

[8]We collected 37, 375, 33, 257, 713, and 171 documents, respectively, for the keywords (consulted in February 2024). There were many double counts. In addition, many papers with DFI are in fact irrelevant, as they focus on other acronyms such as "Dougados Functional Index" or "DNA fragmentation index". We excluded words like development banks or international financial institutions because they provide too many results without any connection to our analysis.

citing this article (using Google Scholar). In this way, we identified new documents to which we applied the same procedure (read the abstract to assess their relevance and, if so, perform the snowballing approach). At this stage, we considered both published and unpublished papers and reports (grey literature).

We then carefully read all the documents to determine their relevance and classified them into different categories. Relevance is defined by two criteria. First, the document must focus on DFIs. Second, we evaluate the scientific relevance of each paper and report. In fact, the initial list of documents included many reports, some of which were produced by DFIs themselves. These reports often offer very interesting discussions of issues of concern to DFIs and provide many examples. However, only a few publications have scientific content (in the form of robust data analysis). Since our goal is to synthesize the scientific knowledge on DFIs, we limited our scope to publications (published articles, working papers or reports) that have a clear scientific added value.

In a final step, we retained 78 publications (list available upon request). We wrote a synthesis of each paper, presenting its objective and research question, data and methodology, and results. We then classified the papers into different themes, which were the structure of the literature review presented above. We do not cite all the publications collected, as some of them are irrelevant for our purpose.

4 The raison d'être and role of DFIs

In line with the literature on development banks, DFIs are seen as a way to address capital market failures. Several market failures can justify public intervention in finance (Stiglitz, 1993): asymmetric information between borrowers and lenders, inability to match social and private returns due to externalities, excessive risk aversion and short horizon of commercial banks, among others. The intervention of public banks is justified because these lenders are able to reduce screening and monitoring costs (De Aghion, 1999; Eslava and Freixas, 2021), are more patient and less profit-oriented than their commercial counterparts, and facilitate risk diversification (Arrow and Lind, 1970; Anginer et al., 2014).

Fernández-Arias et al. (2020) extend the analysis by considering DFIs[9] may not only correct market failures but also be responsible for identifying them. Indeed, market failures are not directly observable, especially in the context of structural transformation. In their lending activities, DFIs will identify the main market and government failures.

[9]In these papers, the authors use the term "development banks", but their definition is closed to DFIs. For example, Fernández-Arias et al. (2020), "the activities of development banks that are designed to have a direct effect on increasing productivity, especially those that build productive capacity and stimulate structural change"

The authors therefore suggest that the role of these institutions is also to act as discovery agents. This knowledge is public knowledge that is shared with other stakeholders. This idea was already included in the demonstration effect modeled by De Aghion (1999). Development banks are engines of knowledge acquisition and transfer to commercial banks. However, Fernández-Arias et al. (2020) suggests that the knowledge gained needs to be shared not only with other lenders but also with policy makers in order to design effective programs.

Mazzucato and Penna (2016) goes further on the role of DFIs in "correcting market failures".[10] Indeed, DFIs are the engine to play a market shaping/creating role. This role of DFIs is particularly relevant in emerging markets, which are characterized by radical uncertainty. Emerging markets include new industries (such as the green economy), but also areas where private sector initiative is lacking. Collier et al. (2020) provide an interesting discussion on how the business model of DFIs could change to fulfill this mission in fragile countries. The authors emphasize the importance of loss taking and concessional lending. In addition, DFIs could act as knowledge producers and capitalize on success stories.

Another strand of the literature is more skeptical about the role of public banks, including DFIs. Indeed, state banks are seen as favoring the re-election of incumbents or supporting connected firms (La Porta et al., 2002; Dinç, 2005). Some studies have examined whether DFI lending decisions are influenced by political interests. A first approach is to examine the geographical distribution of DFI projects. Dreher et al. (2019) examined whether IFC lending is influenced by board composition. Their results, based on 3000 projects from 1995 to 2015, show that countries and firms are more likely to receive IFC projects if their government has a seat on the board. This effect is amplified when there is joint board membership, defined as a situation where the board includes representatives from both the country of the borrowing firms and the recipient country. Another approach is to use the time variation in the allocation to investigate possible election cycles. Bouchet et al. (2024) documented the existence of both domestic and international political cycles in the allocation of World Bank procurement contracts. The existing literature is mainly limited by data availability, which explains the predominance of papers focusing on the World Bank Group. It remains plausible that political motivations are more pronounced for DFIs belonging to one country, given their potentially greater susceptibility to state influence. However, the only paper that addresses this issue does not support this hypothesis. Frigerio and Vandone (2020) found no similar behavior among European DFIs, except in countries with lower levels of democratic development.

[10] Mazzucato and Penna (2016) does indeed refer to sovereign investment banks (SIBs), which are not clearly defined in the paper. However, according to the examples given and the description, these SIBs are close to domestic DFIs.

It is therefore possible that the results obtained in Europe are not valid elsewhere.

5 The internal organization of DFIs

The internal organization of an institution - its governance, human resource management, processes and incentives - is critical to its effectiveness. Despite its potential importance, this aspect has often been overlooked. The governance of development banks has been a controversial issue in many countries, particularly because of its role in explaining their failures in the 1980s and 1990s (Smallridge and De Olloqui, 2011). While some reports have touched on the governance of DFIs (Luna-Martinez et al., 2018; Attridge and Novak, 2022), the analysis faces the challenge of moving beyond mere *de jure* corporate governance arrangements, such as transparency, board composition, and independence, to delve into their practical implementation and effectiveness.

To the best of your knowledge, only two papers have addressed the issue of human resources. Limodio (2021) examines the allocation of bureaucrats within the World Bank. Even though the World Bank is not a DFI per se, its findings deserve special attention. Combining extensive datasets on project performance and manager information, the study documents negative assortative matching between high-performing bureaucrats and low-performing countries, suggesting that better bureaucrats are assigned to more complex countries. In another paper, Sundberg (2023) focuses on locally recruited staff within DFIs in Kenya. The results suggest that local staff do not differ significantly from international staff in terms of expertise, career development, and job insecurity. While these findings are reassuring for project selection, the study notes a shift in decision-making from field offices to headquarters, raising concerns about a reliance on hard information over soft information (Liberti and Petersen, 2019), which could potentially exclude certain local firms that are unable to provide hard information.

Another aspect that is often overlooked in the functioning of DFIs is the process (screening, selection, monitoring). The literature is remarkably silent on these aspects. It is well known that DFIs impose strict due diligence, know-your-customer (KYC) and environmental, social and governance (ESG) requirements that disqualify many companies. Another cost is the lack of a common framework, as each DFI often operates with its own methodology (Gössinger et al., 2011). The impact of these features remains largely unexplored.

6 Sources of funds and instruments

DFIs differ from both commercial and development banks in terms of resources and (financial) instruments. On the funding side, DFIs mainly use their own resources, but can also raise funds in the market. There is a rather limited discussion on the sources of DFI funding. In particular, there is limited discussion on the role of public support and (implicit) subsidies. DFIs benefit from an explicit or implicit transfer from the public sector to the private sector. Subsidies can be both general and project-specific. General subsidies allow DFIs to access cheaper funds through implicit government guarantees, tax exemptions, or the absence of dividend payments, which represent a transfer from taxpayers to DFIs. Project-specific subsidies are used to reduce financing costs by offering better credit terms (subsidized rates, longer maturities, grace periods, etc.) or by providing related services such as technical assistance to investees. Unfortunately, there is a dearth of literature that calculates the amount of subsidies and examines their impact on DFI activity. Some research has attempted to quantify the cost of subsidies to taxpayers (Te Velde and Warner, 2007; Gower and Gower, 2015). This analysis is complicated by a lack of data and requires strong assumptions. In addition, Carter (2015) discusses the rationale for subsidizing private investment in developing countries, arguing that it is a legitimate use of aid when social benefits exceed private benefits. However, he cautions that subsidies should only be used for projects that truly need a subsidy to be viable. Identifying such projects is complex because social benefits are slow and difficult to track. Subsidies should not be given to projects that are already viable or profitable without public support.

On the asset side, several papers have tried to identify the best instruments (relative to the problem to be solved). These papers often emphasize that providing guarantees to commercial banks is the most effective instrument to increase the social optimum at a lower cost to the taxpayer (De Aghion, 1999; Arping et al., 2010; Hainz and Hakenes, 2012; Eslava and Freixas, 2021).[11] In contrast to these results, the use of guarantees

[11] De Aghion (1999) focuses on the financing of new industries that require the accumulation of knowledge. The results suggest that the development bank alone is not sufficient to promote new sectors; instead, it should be complemented by increasing expertise through targeting and by diffusing this knowledge to commercial banks through co-financing and co-ownership. In a moral hazard model with unobserved effort, Arping et al. (2010) examines how public resources should be allocated between guarantees and co-financing to finance entrepreneurship. The paper documents that co-financing becomes a relevant alternative after a certain level of guarantee. Hainz and Hakenes (2012) proposes a model of adverse selection with three types of projects: good projects that would be financed by the private sector, bad projects that would not be financed, and projects that have a positive net present value but require a subsidy to be financed. The results suggest that it is optimal for commercial banks to lend at subsidized rates when tax distortions are high and screening costs are limited. Eslava and Freixas (2021) constructs a model based on screening costs to compare the benefits of lending to commercial banks at subsidized rates versus guarantees. Regardless of their structure, both models show that guarantees are a preferable instrument because they are less costly to the taxpayer and do not reduce the effort of the

remains limited (see last column of table 2). Pereira Dos Santos and Kearney (2018) examines this puzzle. The authors document that the low use of guarantees is explained by both demand-side and supply-side barriers. On the supply side, guarantees are considered a loan in the portfolio and therefore consume a lot of capital (even if not needed). On the demand side, the general perception of private investors is that guarantees are expensive, lack simplicity and do not meet important requirements such as broad risk coverage, payment on demand and short negotiation and preparation time. In a recent paper, Flammer et al. (2024) examines the level of concessionality. Although DFIs have announced that they will invest at market rates, they sometimes offer concessional financing. To do so, they use a dataset of 173 blended co-investment deals of the IFC from 2018 to 2023. The results document that the level of subsidy is higher for projects with a higher sustainability impact per dollar invested, and in countries with higher political risk and a higher degree of information asymmetry. In other words, the IFC tends to subsidize projects with higher social value. However, the scope for action can be broadened. Attridge and Novak (2022) documents that many DFIs are overly liquid, suggesting that they could perform well and provide more subsidies without additional - public - funding. However, the role of subsidies in DFIs remains an open question, as discussed below.

A small body of literature has attempted to examine how funding structure alters DFI investments. This body of literature is particularly interested in the impact of market access by DFIs. Indeed, debt issuance by DFIs allows them to mobilize significant leverage and expand their operations. Moreover, market pressures can potentially limit political influence, allowing DFIs to be more independent in their decision-making processes. Conversely, to maintain access to international financial markets, DFIs need to maintain their creditworthiness, which requires a more prudent approach to lending decisions. There is evidence that differences in funding structures influence lending decisions. Humphrey (2016) observes a convergence among the three MDBs under consideration (World Bank, IADB, and CAF) towards a similar model that favors low-risk projects to maintain access to internal capital markets. The importance attached to financial indicators is reinforced by the growing role of rating agencies (Humphrey, 2017). Attridge and Novak (2022) reaches a similar conclusion about the more conservative lending behavior of DFIs that rely on the market to finance their activities. Their analysis, based on annual reports and interviews with staff from six bilateral DFIs (BII, DEG, DFC, FMO, Norfund, Proparco), shows that the most risk-averse DFIs are Proparco and FMO, both of which rely on debt issuance. [12]

financier.

[12]In the absence of direct information on investee risk, Attridge and Novak (2022) use three pieces of information based on portfolio composition: financial products (equities are considered riskier), geography (low-income countries and fragile states are considered riskier), and sector (finance is considered less

7 Financial performance

DFIs are stand-alone entities that must achieve a minimum financial performance in order to continue operating. DFIs must strike a balance between financial performance and the impact of their investments. Ideally, both sides of the coin should be included in the same analysis to provide a cost-benefit analysis. However, measuring both is challenging for a variety of reasons. We briefly review the few studies that have examined the financial performance of DFIs. We then review evaluations of DFIs' impact in the following section.

The issue of DFI financial performance is not new, but analysis has been hampered by two main challenges. The first challenge is obtaining data, as DFI transparency is far from perfect. Even where progress has been made, many DFIs fail to publish data, hampering the work of researchers.[13] The second challenge is to distinguish between expected (*ex-ante*) and realized (*ex-post*) outcomes. It is quite common to observe only realized outcomes. However, this information is only partially informative. Differences may result from DFIs deliberately choosing less profitable/higher risk projects, or from other factors ranging from poor management to lack of opportunity. A complete analysis should therefore include information on the behavior of DFIs and their willingness to invest in enterprises with lower financial prospects but with positive impacts.

A few papers have attempted to examine the performance of DFIs. Cole et al. (2024) exploit a rich dataset on IFC's equity investments from 1961 to 2019 to analyze DFI returns. By examining the cash flow of all equity investments, which total more than 2,500, the authors calculate the financial performance of IFC's entire portfolio and derive the public market equivalent. The study has three main findings: First, IFC's risk-adjusted returns are comparable to the S&P 500, at least through 2010, with a decline in the last decade. Finally, returns are lower in the most financially developed markets. Using a comprehensive dataset, this study provides compelling evidence that DFIs can be profitable, especially when targeting financially constrained markets with high growth prospects.

The study, conducted by Attridge and Novak (2022), focuses on six bilateral DFIs (BII, DEG, DFC, FMO, Norfund, Proparco) and compares them to three peer institutions.[14] The results show that DFIs are not particularly profitable, with this result

risky). They combine the three indicators to measure ex-ante risk, rather than focusing on realized risk, such as non-performing loans (NPLs). This approach is subject to caveats, as equity may be provided to low-risk firms or markets (Kenny et al., 2018b).

[13]The *Publish What You Fund* initiative examines DFI transparency in its DFI Transparency Index report (available at this link here). The report shows that multilateral DFIs are more transparent than bilateral DFIs. However, only two DFIs (IFC and African Development Bank) score above 50 (out of 100).

[14]The three peer institutions are Banco de Desenvolvimento de Minas Gerais, the Private Infrastructure Development Group, and the Eastern and Southern Africa Trade and Development Bank.

primarily attributed to internal deficiencies such as an inability to control costs and an ineffective pricing model. The study suggests that this lack of profitability is not a deliberate choice to focus on low return projects. In addition, the study notes that the DFIs for which data are available (DEG, FMO, and Proparco) have high levels of liquidity, indicating limited risk appetite and potential for improvement in their capital utilization.

8 The impact of DFIs

The final, but central, question is whether DFIs change anything in terms of economic and non-economic impacts. The first generation of papers examining the impact of DFIs on economic activity took a macroeconomic perspective. Some studies focused specifically on the impact of DFI investments on growth, employment, or productivity. For example, Massa (2011) collected data on investments by three multilateral DFIs (IFC, EBRD, and EIB) at the national level for 101 countries from 1986 to 2009. The results indicate a positive correlation between DFI investments and economic growth, with a stronger effect in low-income countries. Another study by Jouanjean et al. (2015) examined the role of DFIs in job creation and labor productivity growth using information on six DFIs (Proparco, IFC, EIB, EBRD, CDC, DEG) in 62 countries from 2004 to 2009. The results suggest a positive impact on labor productivity. In addition, Massa et al. (2016), using hand-collected data on investments by 14 DFIs from 1990 to 2014, found a positive impact on economic growth, although the effect on labor productivity was found to be non-existent. However, despite their interest, macroeconomic analyses face the problem of disentangling the effects of DFI investments from various unobserved factors that may independently drive growth or attract investment by DFIs (and other investors).

A closely related literature has focused on aggregate investment by examining the crowding-in effect of DFIs on private investors. The theoretical expectation is that DFIs have a crowding-in effect on private investors, meaning that for every dollar invested by DFIs, more than one dollar is expected to be invested. Conversely, DFIs may crowd out private initiatives and thus reduce total investment. The first approach to testing the mobilization effect of DFIs is to estimate the elasticity of aggregate investment to DFI investment. Evidence, using both cross-country data Massa et al. (2016) or national case studies Barboza and Vasconcelos (2019), documents a positive impact of DFI investment. However, Carter et al. (2021) show that the approach based on estimated elasticity is flawed, even after taking into account different approaches to control for endogeneity. Recent articles make use of granular data on project financing arrangements (often using syndicated loan data). These studies document that the presence of development banks stimulates the financing of large and risky projects (Hainz and Kleimeier, 2012; Kotchen

and Negi, 2019; Gurara et al., 2020) and financially constrained firms (Gong et al., 2023). In addition, public investors (e.g., DFIs) are able to mobilize private lenders not only during the project (Degl'Innocenti et al., 2022) but also after project completion (Broccolini et al., 2021; Gatti et al., 2023). Nevertheless, blended finance is less effective, almost non-existent, in low-income countries (Attridge and Engen, 2019). Moreover, a recent study documents that the mobilization effect does not spill over across sectors and countries (Mishra, 2023).

A meso-economic approach to studying the impact of DFIs is to examine who receives support in order to confirm the principle of additionality. The underlying premise is that an examination of lending patterns can reveal whether DFIs are actually adding value by financing regions or sectors with limited access to capital. Kenny et al. (2018b) uses project data from 6 DFIs (IFC, CDC (now BII), DEG, FMO, OPIC (now DFC), and Proparco) from 2012 to 2016. Similarly, Attridge and Novak (2022) examines the portfolio composition of six bilateral DFIs (BII, DEG, DFC, FMO, Norfund, Proparco) over the period 2018-2020. Both studies converge. The countries that receive the most funding from DFIs are predominantly large, middle-income economies. Notable examples are India, Turkey, South Africa and Brazil. This pattern is consistent with the findings of Leo and Moss (2016), which found a similar trend for OPIC, the former U.S. DFI, which had a portfolio bias toward richer countries[15], and two papers Lepage (2021); Kenny et al. (2018a) that focused exclusively on the IFC. However, Dreher et al. (2019) finds that the IFC directs more of its lending to poorer countries with limited access to bilateral aid. The analysis of DFI portfolios has been expanded to include other dimensions in addition to geography. For example, Attridge and Novak (2022) suggests that equity instruments may have a greater impact on firms by giving them access to long-term resources. As a result, DFIs that rely more on equity are expected to have greater impact. However, Kenny et al. (2018b) challenges this view by showing that DFIs are more likely to use equity in lower-risk countries.

A recent literature has used micro-level data and quasi-experimental approaches to assess the impact of DFIs on beneficiaries. These papers typically compare firms that have received DFI support with similar counterparts, drawing on large datasets that include information on both firms and DFI projects, often based on proprietary datasets. One line of research examines the impact of direct financing (business loans or equity). Several studies (Inoue et al., 2013; Lazzarini et al., 2015; Gomes and do Valle, 2023) have examined the activities of BNDES, which is the largest domestic DFI in Brazil. A synthesis by Barboza et al. (2023) indicates that the BNDES is more effective in

[15]Another interesting finding in this issue is that OPIC did not have a specific preference for U.S. firms.

supporting SMEs. In a European context, Clò et al. (2022) examines the impact of DFI equity participation on firms' patenting activity. The results suggest that firms experience an increase in patenting activity after being targeted by an equity deal, with a stronger effect when DFIs collaborate with non-DFI investors. The effect is particularly strong when the DFI is located in a country with high institutional quality and when the targeted firms operate in high-tech and green industries.

Another strand of research has focused on the impact of intermediated lending on final beneficiaries (non-financial enterprises, mainly SMEs). Cassano et al. (2013) study the impact of an EBRD-supported microfinance program in four countries (Bulgaria, Georgia, Russia, and Ukraine). Their main finding suggests that the supported firms are more likely to borrow more in the future. In addition, the firms that benefited from the programs performed better on average, although the smallest loans had a negative impact on performance. Amamou et al. (2023) examine the impact of EIB support to banks during the 2008 global financial crisis. Using proprietary EIB data on the final recipients (non-financial corporations) of intermediated loans, combined with firm-level data, the results suggest that firms benefiting from EIB-supported loans performed better in terms of both employment and investment. The positive effect of the EIB lending programme is accentuated in countries where banks relied heavily on interbank funding to finance their activities. While this paper is not limited to developing and emerging countries, it extends and confirms Gereben et al. (2019), who addressed the same issue for a sample of SMEs operating in eight Central and Eastern European countries. In a recent paper, Aydin et al. (2024) focus on the impact of an ERDB program targeting five banks in Turkey and dedicated to women entrepreneurs. By combining data on final beneficiaries with a national loan registry and financial information on firms, the program increased lending to women entrepreneurs. This program not only benefits women entrepreneurs who already have a loan, but also increases the number of borrowers (two-thirds of which is explained by poaching and the rest by the arrival of new clients). Women entrepreneurs who benefited from a loan from a targeted bank borrowed more and performed better than other new firms owned by women who borrowed for the first time. However, there was no impact at the district level due to the small size of the women's enterprises. It is worth noting that despite the significant support provided by DFIs to other institutions such as microfinance institutions or impact investment funds, the literature is rather silent on the effect of support to these institutions.

A remaining question, however, is the possible spillover effects on non-assisted firms. Indeed, the effect is theoretically unknown. On the one hand, assisted firms may benefit from a competitive advantage (thanks to capital obtained on better terms). On the other hand, the increased activity of assisted firms could benefit everyone. Ru (2018) addresses

this issue by focusing on the activities of the China Development Bank (CDB), the main development bank in China and one of the largest in the world. CDB's portfolio of industrial loans is skewed toward state-owned enterprises (SOEs). The analysis shows a positive impact on supported SOEs, but an ambiguous impact on non-targeted private firms. CBD industrial loans to SOEs have a negative impact on private firms' total assets, employment, debt, total sales, return on assets, and sales per employee. However, they have a positive impact on firms in downstream industries (which purchase products from the supported firms). Nevertheless, the net effect is negative because crowding out outweighs crowding in. Léon (2024) focuses on a close question by examining the possible spillover effects for intermediated lending programs in Africa. By contrasting hand-collected data on 900 projects from 17 DFIs in Africa with bank-level data, the paper shows that DFI-supported banks reduce their lending after the treatment. The author tests several explanations and finds support for the lack of absorptive capacity of DFI-supported banks. DFI-supported banks incur additional costs (such as reporting costs). Such costs cannot always be absorbed by banks with limited (human) resources. If this is not the case, part of the resources will be used to finance the targeted beneficiaries at the expense of other lenders. As the author acknowledges, the impact on financial access is unclear, as it depends on who bears the costs. This finding contradicts the results of Paravisini (2008), which documents that an on-lending program (supported by the Inter-American Development Bank) stimulates the credit growth of banks in Argentina. The possible difference between the two studies may belong to a different context De Haas and González-Uribe (2024). However, Léon (2024) does not document that unsupported bank lending is affected.

There is a lack of research on the non-economic impacts of DFI investments. Evidence on the environmental impacts of DFI support is scarce and mixed. Kotchen and Negi (2019) examines the determinants and impacts of co-financing using a comprehensive dataset from the Global Environment Facility. The authors use data on approved GEF projects (3,296 from 1991 to 2014) and 650 completed projects with an ex-post evaluation. The results show that cofinanced projects have better ex-post performance. However, the result is reversed for privately funded projects, which tend to underperform. Although this paper is not directly dedicated to DFIs, it shows that co-financing by private partners may not have the expected results. In another paper, Probst et al. (2021) evaluates the impact of a renewable energy program designed to attract private energy providers and support from KfW and the government of Uganda. The program aims to improve the risk-return balance. The analysis is conducted in two parts. The results support financial additionality, indicating that most of the 14 small hydropower plants financed were additional. The study also highlights the negative impact of power

outages on business productivity and shows that the projects are successful in reducing power outages.

A recent working paper by Ganson et al. (2023) examines the socio-political impact of DFI investments. The paper examines whether areas closest to IFC projects experienced an increase in armed conflict between 1994 and 2022. The study uses a matching and comparative approach, pairing an IFC project area with similar areas without IFC projects, while controlling for various factors (e.g., presence of politically excluded groups, GDP, regime type, population size) that influence conflict. The results indicate that IFC projects lead to significant increases in armed conflict worldwide. On average, a single project is associated with 7.6 additional armed conflict events in the year following its implementation. The impact is more pronounced for capital-intensive projects, which are more susceptible to rent-seeking and resource competition.

9 Avenues for future research

The current literature provides valuable insights into the role, organization, resources and instruments, performance and impact of DFIs, but several critical areas in each area remain under-researched.

First, the evolving global context characterized by climate change, geopolitical fragmentation, and economic instability calls for a re-examination of the fundamental role of DFIs. In particular, a key question is whether DFIs can serve two purposes. On the one hand, DFIs are created to support the private sector in developing countries. On the other hand, DFIs are expected to act as role models for other investors. The question is whether both objectives can be achieved and are even compatible. For example, DFIs benefit from pecuniary (implicit subsidies) and non-pecuniary (political support) assets that make them inherently different from private investors. As a result, their role model is questionable. Should DFIs be able to kill two birds with one stone? The issue becomes more complex if we add that DFIs can be seen as a vehicle to promote the business operations of the DFI-originated companies in the country. This last point is gaining in interest due to the various austerity measures in industrialized countries and the questioning of aid in some of them. This question has profound implications for their operational strategies and priorities (e.g. the role of subsidies).

Second, the literature on the functioning of DFIs is rather limited. More research is therefore needed to better understand how DFIs actually operate and how this affects their behavior, financial performance, and impact. Indeed, the role of the internal organization of DFIs is relatively overlooked. It would be beneficial to explore issues such as governance or incentive systems and their impact on DFI activities. In addition, more

needs to be done to examine the day-to-day operations of DFIs and their procedures. One interesting question is how DFIs integrate environmental concerns into their decisions and how lending procedures exclude many firms in low-income countries. It would also be interesting to examine how the digital revolution has affected the way DFIs operate in these dimensions.

Third, there is also a lack of research on the business model of DFIs. In particular, one promising avenue is to examine how the funding structure shapes DFI behavior. While the initial work presented is an important step, there is a need for more systematic analysis specifically tailored to DFIs. In particular, future research could delve deeper into the trade-off and determine whether access to international markets enables DFIs to raise more funds without engaging in low-risk behavior. Another important issue is how DFIs can play a pivotal role in leveraging private capital through innovative approaches on both the funding and the asset side.

Fourth, the literature on DFI performance remains limited, despite its importance for both academics and policymakers. A comprehensive analysis of the individual performance of DFIs should take into account their lending behavior and risk appetite. Simply comparing financial performance is not very informative, as DFIs are not profit-oriented investors. Comparing their performance with other active investors is misleading. A DFI may underperform its peers because it is less efficient and because it targets projects with lower risk-adjusted returns. One promising approach is to use the granular data on projects financed by DFIs to refine the analysis of DFI performance. Another interesting approach is to take a global view of DFIs' investment portfolios. In line with standard financial practice, we can see whether some DFIs diversify their portfolio (in terms of risks and returns).

Fifth, despite the burgeoning literature on the impact of DFIs, there are many avenues to explore. First, the focus of future analyses should include low-income countries, as the current literature has mainly focused on emerging markets such as Eastern and Central Europe, Brazil, Turkey, and China. Extrapolating results from emerging markets to low-income countries can be challenging due to potential differences in leverage and the conditions necessary for positive impacts. Second, future studies should move away from examining average effects and instead adopt models that account for heterogeneity in terms of instruments and enterprises supported. Third, additional research is warranted to examine the impact on non-targeted firms. On the one hand, these firms may suffer from unfair competition as their counterparts benefit from better credit conditions. Conversely, positive impacts may spill over along the value chain, as demonstrated by Ru (2018). DFIs often inject funds directly into large firms, and studying spillovers in downstream and upstream sectors could provide valuable insights. Fourth, the litera-

ture should focus on assessing the social, political, and environmental impacts of DFI investments. The current literature in these areas is limited and inconclusive.

Finally, there is a lack of research on how DFIs interact with their ecosystem, with the exception of the discussion on government ownership (section 4). Griffith-Jones et al. (2020) discuss how development banks could use multiple levers to promote the transition to a low-carbon economy, beyond their role as traditional financiers (of infrastructure investment). They have a role to play in mobilizing private capital, but also in influencing policy. The same reflection on DFIs in low- and middle-income countries to address challenges would be welcome. Meanwhile, DFIs are important financiers of many impact funds in developing countries. We know almost nothing about the interaction between private investors and DFIs. In addition, no paper has examined how DFIs work together.[16] In fact, the relationship between DFIs combines cooperation and competition. Despite a burgeoning literature on "coopetition" (Bouncken et al., 2015; Bengtsson and Raza-Ullah, 2016), this framework has never been mobilized to characterize linkages between DFIs. In other words, research on the interaction between DFIs and their partners could be of interest.

To conclude this discussion, research on DFIs is still in its infancy. An important step to accelerate research on DFIs is to allow researchers to open their doors. There is a need to have access to granular data (including proprietary datasets), but also to allow researchers to integrate their structure. The combination of quantitative and qualitative approaches is crucial to better understand how DFIs behave and perform. A crucial prerequisite is that DFIs and their authorities are aware of the positive impact of research on their activities and legitimacy, despite some (short-term) possibly disturbing results.

10 Conclusion

This paper presents a literature review on development finance institutions (DFIs), examining their raison d'être, functioning, resources and tools, performance, and impact. We discuss key contributions in each area and open avenues for further research.

A remaining question is whether these findings can be useful for policymakers in imagining the future of DFIs. Recall that the role of DFIs is to complement existing investors by supporting creditworthy enterprises with development impact in low- and middle-income countries. By their very nature, DFIs should invest in uncertain projects in complex environments where the risk-reward balance is positive but insufficient to attract private lenders.

[16] McHugh (2023) assesses the competitive conditions of DFIs. However, the focus is not on competition among DFIs, but rather on providing evidence that DFIs operate in an oligopolistic market.

The literature on DFIs raises concerns about their ability to deliver their additional impact. Indeed, current evidence suggests that DFIs are risk-averse and do not take full advantage of their public status. They have difficulty reaching SMEs in low-income countries. DFIs are more active in investing in emerging markets and in large projects and enterprises, where they can access other funding.

A challenge is therefore to reform DFIs to encourage them to rebalance their activities towards greater impact, possibly at the expense of profitability and risk ratios. This issue is particularly important given the challenges that lie ahead in developing countries, such as financing climate change adaptation and mitigation, or promoting a vibrant private sector to stabilize fragile states. Policymakers should provide sufficient incentives for DFIs to explore niche markets, thereby moving from market fixers to market creators/enablers. Four types of reforms are possible.

First, such a shift implies some changes in the internal functioning of DFIs. Although the current literature is silent on these aspects, recruitment strategies beyond financial analysts and incentives for loan officers should be considered as possible levers. For example, the incentive system should be linked more to the impact of investments than to the size or number of deals.

Second, DFIs should use their public status and the associated (indirect) subsidies to accept more risk or lower/delayed returns. However, subsidies have potential side effects that are rather unknown and unquantified. The issue of subsidies is closely related to the mission of DFIs discussed in the previous section. At least some clarification on this point would be welcome.

Third, consideration should be given to the best instruments for targeting niche markets and new initiatives. To date, DFIs tend to finance well-established businesses and impose many requirements. Such procedures may not be relevant for operations in some regions, such as fragile states or emerging markets, where companies do not have a financial track record. Innovations in procedures and financial instruments are therefore welcome.

Finally, DFIs play a primary role in attracting private sector flows. This implies mobilizing private capital directly through blended finance mechanisms (project cofinancing, intermediated loans). However, neither the volume nor the allocation of mobilized private capital is satisfactory. Changes are therefore needed to provide incentive mechanisms to increase volume and allocation.

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Contact
www.ferdi.fr
contact@ferdi.fr
+33 (0)4 43 97 64 60